© Crown copyright • www.metoffice.gov.uk

# Near record temperatures in 2010 to be followed by cooler 2011

2 December 2010

**Global temperature has warmed to near record levels in 2010 say climate scientists from the Met Office and the University of East Anglia. Provisional figures for the three main global temperature datasets put 2010 on track to become first or second warmest in the instrumental record.**

The preliminary figure for January to October 2010 is 0.52 °C above the long-term average on the Met Office – Climatic Research Unit (HadCRUT3) dataset, placing it equal with the record-breaking 1998.

The Met Office annual global temperature forecast for 2010, Climate could warm to record levels in 2010, issued at the COP15 talks in Copenhagen, predicted that the year was “more likely than not” to be the warmest year. Dr Adam Scaife, head of long range forecasting at the Met Office said, “The three leading global temperature datasets show that, so far, 2010 is clearly warmer than 2009 despite El Niño declining and being replaced by a very strong La Niña, which has a cooling effect.”

Although La Niña has stabilised, it is still expected to affect global temperature through the coming year. This effect is small compared to the total accrued global warming to date, but it does mean that 2011 is unlikely to be a record year according to the Met Office prediction based on the three main datasets. Nevertheless an anomaly of 0.44 °C is still likely — with the range very likely to be between 0.28 °C and 0.60 °C. The middle of this range would place 2011 among the top 10 warmest years on the record.

Dr Vicky Pope, the Met Office’s head of climate science advice said, “Our annual prediction of global temperatures for the next year combined with our monitoring of the observed climate helps people to put the world’s current climate into context.”

## Notes for editors

- The 1961–90 global average mean temperature is 14.0 °C.
- Over the years 2000–2010 that the Met Office has issued forecasts of annual global temperature, the mean value of the forecast error is 0.06 °C.
- Interannual variations of global surface temperature are strongly affected by the warming influences of El Niño and the cooling influences of La Niña in the Pacific Ocean. These are quite small when compared to the total global warming since 1900 of about 0.8 °C but nevertheless typically reach about ±0.10 °C, and can strongly influence individual years.
- For the 2011 forecast the Met Office has used the Met Office and University of East Anglia surface temperature record over the global land and the global oceans (Met Office – CRU) along with those maintained by the NOAA National Climatic Data Center and the NASA Goddard Institute of Space Studies, both in the United States. All three records were used in the latest report of the Intergovernmental Panel on Climate Change.
- The Met Office prediction for 2011 combines information from our dynamical models and statistical information. The forecast takes into account known contributing factors, such as El Niño and La Niña, increasing greenhouse gas concentrations, the cooling influences of industrial aerosol particles, solar effects, volcanic cooling effects if known, and natural variations of the oceans. No significant volcanic effects are currently expected in 2011.
- The table provides the top 20 rankings for all three datasets and includes Jan to Oct 2010:

| Rank | HadCRUT3 | | NOAA NCDC | | NASA GISS | |
|---|---|---|---|---|---|---|
| | Year | Anomaly * | Year | Anomaly * | Year | Anomaly * |
| 1 | 2010 | 0.52 | 2010 | 0.54 | 2010 | 0.58 |
| 2 | 1998 | 0.52 | 2005 | 0.52 | 2005 | 0.56 |
| 3 | 2005 | 0.47 | 1998 | 0.50 | 2007 | 0.51 |
| 4 | 2003 | 0.46 | 2003 | 0.49 | 2009 | 0.50 |
| 5 | 2002 | 0.46 | 2002 | 0.48 | 2002 | 0.49 |
| 6 | 2009 | 0.44 | 2006 | 0.46 | 1998 | 0.49 |
| 7 | 2004 | 0.43 | 2009 | 0.46 | 2006 | 0.48 |
| 8 | 2006 | 0.43 | 2007 | 0.45 | 2003 | 0.48 |
| 9 | 2007 | 0.40 | 2004 | 0.45 | 2004 | 0.41 |
| 10 | 2001 | 0.40 | 2001 | 0.42 | 2001 | 0.40 |
| 11 | 1997 | 0.36 | 2008 | 0.38 | 2008 | 0.37 |
| 12 | 2008 | 0.31 | 1997 | 0.38 | 1997 | 0.32 |
| 13 | 1995 | 0.28 | 1999 | 0.32 | 1995 | 0.30 |
| 14 | 1999 | 0.26 | 1995 | 0.31 | 1990 | 0.29 |
| 15 | 1990 | 0.25 | 2000 | 0.29 | 1991 | 0.28 |
| 16 | 2000 | 0.24 | 1990 | 0.29 | 2000 | 0.26 |
| 17 | 1991 | 0.20 | 1991 | 0.24 | 1999 | 0.25 |
| 18 | 1983 | 0.19 | 1988 | 0.20 | 1988 | 0.24 |
| 19 | 1987 | 0.17 | 1987 | 0.20 | 1996 | 0.22 |
| 20 | 1994 | 0.17 | 1994 | 0.20 | 1987 | 0.20 |

* Anomaly: °C above long-term average.

**Contact information**

Met Office Press Office: **+44 (0)1392 886655**

E-mail: Press Office

Met Office Customer Centre: **0870 900 0100**

If you’re outside the UK: **+44 1392 885680**